

BIG SKY BIODIESEL WILL BEGIN TESTING FOR BIODIESEL POTENTIAL

By Amanda Breitbach

Dawson County Economic Development Council Director Gene Buxcel, who has been assisting Big Sky with the start-up process, explained that the 80-gallon batch processor will allow the company to begin testing different oils before making the level of investment necessary for a larger continuous flow plant.

Big Sky Biodiesel is currently in the permitting process. Natural Resource Group of Minneapolis is pursuing an air quality permit for Big Sky, the first step in that process.

A batch flow processor has several advantages. Buxcel anticipates using it for testing, training and demonstrations. By running different oils through the batch processor, operators can come up with an appropriate "recipe" suited to the specific characteristics of the oil, he explained. That capability would compliment a continuous flow plant, allowing operators to adjust the controls to suit different oils as they are processed without shutting down production.

The batch processor will be set up in a mobile unit, making it possible for Big Sky to test oil in place for farmers or other interested parties. Another possibility raised by the mobility of the 80 gallon processor would be the collection of used cooking oil. Buxcel suggested that the trailer could process oil in place at collection sites in different communities, which would make it a real possibility for area restaurants. While the feasibility of using restaurant oil is not good for the continuous flow plant because of its unpredictable makeup, once it has been run through the bath processor, the resulting biodiesel can be mixed with other biodiesel.

Technical and safety training is simpler in the smaller facility as well. Buxcel hopes the criteria of the WIRED program at Dawson Community College will allow students to train to operate the plant, experience that could transfer to jobs at ethanol processing or oil seed crushing facilities. He estimated the batch processor could employ the equivalent of four full time employees.

Big Sky will be testing many different kinds of oil for biodiesel potential. Right now Buxcel sees a lot of possibility in linoleic safflower oil, which would produce more oil per acre than most oil seed crops and has a lower viscosity, which performs better in cold temperatures. Heavier oils like soybean, peanut, and corn create more energy but tend to gel up in winter conditions.

"I think the primary use initially will be ... in trucks for lubricity reasons," Buxcel said. Biodiesel is useful as a fuel additive, he explained, decreasing wear and tear on engines. Low sulphur fuel decreases motor life by almost a third, he stated, but a 10 percent biodiesel blend would restore lubricity and help engines last longer.

Big Sky Biodiesel plans to source oil from crushing plants in Montana and North Dakota and sell to area distributors. Buxcel said the company hopes to run tests with the batch processor in January and complete the licensing process by March.